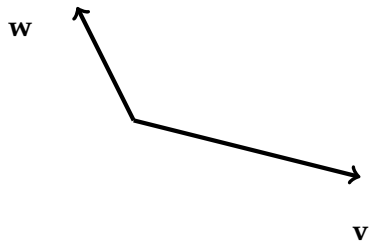
This quiz has two problems worth 10 points.

1. (4 points) The vectors **v** and **w** are drawn below. Sketch and label the vectors $\mathbf{v} + \mathbf{w}$ and $\mathbf{v} - \mathbf{w}$.



2. (6 points)

   (a) Express the question below as two equations with coefficients c and d.

   Is there a linear combination of $\mathbf{v} = \begin{bmatrix} 9 \\ -3 \end{bmatrix}$ and $\mathbf{w} = \begin{bmatrix} -5 \\ 3 \end{bmatrix}$ that equals $\mathbf{b} = \begin{bmatrix} 7 \\ -7 \end{bmatrix}$?

   (b) Solve for c and d or explain why no solution exists.